

EDM Critical Building Blocks and Resources for Struggling Learners

- 1. Daily exposure to the Number Grid:** filling in grids, number grid puzzles, finding patterns on the grid, scrolling – writing numbers on 100s grid, counting aloud, skip counting using the grid

Number Grid Resources:

- K:** **Games:** Chutes and Ladders, Counting Backward, Guess My Number, Mini , Number Grid Search (MM 129), Number-Grid Grab, Number Gymnastics, Number Grid Search, Pin the Number on the Number Grid
Lessons: 5.15, 5.16, 6.10, 7.7, 7.10
Math Masters: 11, 103, 110, 111, 129, 137, 138
- 1st Grade:** **Games:** Number Grid Game, Pin the Number on the Number Grid, Rolling for 50
Lessons: 2.1, 3.2, 3.3, 4.10, 6.5, 9.1, 9.2, 9.3
Math Masters: 22, 54, 56, 76, 109-112, 161, 162, 176, 182, 249, 250, 253, 255, 257- 260, 263, 268, 293, 308, 311, 324, 335
- 2nd Grade:** **Games:** Number Grid Difference Game, Number Grid Game, Pin the Number on the Number Grid,
Lessons: 1.7, 1.8, 7.1
Math Masters: 9- 13, 195, 197, 299, 352, 416- 418, 420, 421, 440, 463
- 3rd Grade:** **Games:** Number Grid Difference Game
Lessons: 1.2, 1.8, 5.1, 7.2, 11.2
Math Masters: 9, 10, 21, 22, 98, 121, 210, 364, 396, 414, 417, 426, 427
- 4th Grade:** **Math Masters:** 46, 79, 403, 404, 426, 427, 431-433, 443, 444
- 5th Grade:** **Math Masters:** 415, 416, 417, 424, 429, 434, 435
- 6th Grade:** **Math Masters:** 407, 498, 411, 413, 414, 418

Note: “MM” is the abbreviation of “Math Masters”.

2. Daily “Fact Power Practice”: Fact triangles, EM games, oral & written facts, and 6-10 problem drill/timed tests)

Fact Power Practice Resources:

Kindergarten: **Games:** Disappearing Train, High Roller
Math Masters: 34, 76, 121-123, 136

1st Grade: **Games:** Addition Top-It (MM), Beat the Calculator (Addition), Difference Game, Domino Top-It, Fact Power Game, High Roller, Shaker Addition Top-It, Turn Around Facts Game
Homelinks: 6.4 (MM 171- 174) 6.7 (MM 181) 6.11 (MM 189) 7.1 (MM 196) 7.5 (MM 211) 8.8 (MM 244)
Home Connections: 28, 29
Lessons: 7.3 (MM 202) 10.3 (MM 286)
Triangle Templates: (MM 170, 327)

2nd Grade: **Facts Table:** MM 421, 443
Games: Addition Top-It, Beat the Calculator (Addition)
Home Connections: 28, 29
Homelinks: 1.13 (MM 2) 2.2 (MM 26), 2.3 (MM 27), 2.4 (MM 28), 2.5 (MM 29, 30), 2.6 (MM 31-33), 2.7 (MM 34, 35), 2.12 (MM 49), 2.13 (MM 51) 11.6 (MM 362), 11.7 (MM 364-366), 11.8 (MM 368, 369), 12.1 (MM 378), 12.5 (MM 391, 392, 393), 12.8 (MM 403-405)
Triangle Templates: (MM 423, 444)

3rd Grade: **Fact Platters:** MM 107
Fact Triangles: +/- (MM 34, 36, 37, 38), \times/\div (MM 99-102, 104, 206, 220, 346, 431-434)
Games: Addition Top-It, Baseball Multiplication, Beat the Calculator (Addition and Multiplication), Fact Triangle Flip, Multiplication Bingo, Multiplication Top-It, Subtraction Top-It
Homelinks: 1.14 (MM 33, 34), 4.5 (MM 96, 97), 4.6 (MM 99, 100, 101, 102), 4.7 (MM 104-105), 5.12 (MM 161), 7.1 (MM 206), 7.6 (MM 220) 10.8 (MM 346), 11.2 (MM 363)
Home Connections: 28, 29
Lessons: 2.1 (MM 36, 37, 38), 7.1 (MM 206-208),
Triangle Templates: (MM 405, 421)

4th Grade: **Facts Tables:** 408
Fact Triangles: MM 384, 385, 387
Games: Addition Top-It, Baseball Multiplication, Beat the Calculator (Multiplication), Credits and Debits Game, Multiplication Top-It, Subtraction Top-It
Home Connections: 26, 27
Lessons: 1.1 (MM 384), 2.10 (MM 68, 69), 3.2 (MM 75), 3.3 (MM 780), 3.5 (MM 85), 3.11 (MM 100), 6.2 (MM 179)

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Timed Tests: MM 391, 392, 410-417

Triangle Templates: (MM 409, 418)

- 5th grade: **Games:** Baseball Multiplication, Beat the Calculator (Multiplication), Credits and Debits Game, Divisibility Dash, Factor Bingo, Multiplication Top-It, Name That Number, Addition Top-It, Multiplication Bull's Eye
 Home Connections: 26, 27
 Lessons: 1.1 to 1.9, 2.1, 2.7 to 2.8, 3.2, 3.5, 3.9, 4.1, 6.8
 Math Masters: 11, 14,-20, 22-28, 36, 54, 103, 105, 109, 133, 187, 189, 202, 207, 222, 236, 348, 375-378, 394, 432, 450 452-458, 493, 498-501
- 6th Grade: **Games:** Credits and Debits Game
 Home Connections: 26, 27
 Math Masters: 32, 33, 106, 107, 196, 198, 240, 241, 429-431, 453, 474, 478

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3. Repeated practice with Everyday Math templates: What's My Rule?, Name Collection Boxes, Frames and Arrows

What's My Rule Resources:

Kindergarten: **Games:** What's My Rule? Fishing,
Math Masters: 57

1st Grade: **Games:** Attribute Train Game, Guess the Rule, Magic Bag Game, What's My Rule? Fishing, What Am I Thinking Of?
Home Connections: 26, 27
Lessons: 5.12, 5.13, 6.8, 8.6
Math Masters: 152-156, 184, 254

2nd Grade: **Games:** Attribute Train Game, What's My Attribute Rule?, What's My Rule? Fishing
Home Connections: 26, 27
Lessons: 7.4, 9.8, 12.5
Math Masters: 47, 48, 70, 285, 394, 425, 426,

3rd Grade: **Games:** What's My Rule? Fishing
Home Connections: 26
Lessons: 2.3, 2.4
Math Masters: 41, 42

4th Grade: **Games:** Getting to One
Home Connections: 24, 25
Lessons: 2.1 3.1, 12.2
Math Masters: 69, 72-74, 92, 405, 407, 423

5th Grade: **5-Minute Math:** 153, 234
Home Connections: 24, 25
Lessons: 10.3, 10.4, 10.5, 10.6
Math Masters: 208, 235, 241, 300, 303, 305

6th Grade: **Home Connections:** 24, 25
Lessons: 2.4, 3.4, 3.5, 3.10
Math Masters: 31, 50, 67, 71, 78, 80, 83-85, 88, 119, 122, 126

Name Collection Boxes Resources

K: **Activities:** 5.4, 7.9, 8.9, 7.15, 7.16, 8.8,
Games: Coin Exchange, Concentration with Number Cards and Dominoes, modified "Guess My Number" see page 351, One Dollar Game, Ones/Tens/Hundreds Game, Paper Money Exchange (Money Cube Game Two), Raft Game
Games Masters: 343

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Math Masters: 13-24, 29, 31, 39, 40, 45, 49, 50, 53, 104, 113-116, 120, 125, 130-134

1st Grade: **Games:** Base-10 Exchange, Buyer and Vendor Game, Coin Dice, Coin Top-It, Dice Roll and Tally Game, One Dollar Exchange, \$1/\$10/\$100 Exchange Game, Penny-Cup, Penny/Nickel Exchange, Penny/Nickel/Dime Exchange, Scissors/Paper/Stone, Tens-and-Ones Trading Game
Home Connections: 23
Lessons: 6.2, 6.3
Math Masters: 164, 165, 206, 262

2nd Grade: **Games:** Array Bingo, Broken Calculator, Buyer and Vendor Game, Coin Top-It, Equivalent Fractions, Musical Name Collection Boxes, Name That Number, Penny-Cup, Spinning for Money
Home Connections: 23
Lessons: 2.9, 3.2, 3.7, 6.6, 8.1, 8.4, 8.5, 10.1, 10.2, 10.11
Math Masters: 40-42, 59, 81, 82, 175, 227, 228, 239-244, 293, 294, 296, 297, 343, 422, 452-455, 458-462, 467

3rd Grade: **Games:** Array Bingo, Broken Calculator, Buyer and Vendor Game, Division Arrays, Name That Number, Penny/Dime Exchange
Home Connections: 23
Lessons: 1.6, 2.8
Math Masters: 15, 16, 33, 215, 218, 219, 267

4th Grade: **Games:** Broken Calculator, Division Arrays, Name That Number, Fraction Match, Fraction Top-it, Fraction/Percent Concentration,
Home Connections: 23
Lessons: 2.2, 7.6, 7.7, 7.8
Math Masters: 35, 42-44, 136, 167, 168, 213, 218, 220-227, 229, 231, 240, 279, 281, 283, 285, 288, 291, 297, 394-397, 445, 446, 473-475, 481, 482

5th Grade: **Games:** Broken Calculator, Exponent Ball, Frac-Tac-Toe, Name That Number, Fraction/Percent Concentration, Scientific Notation Toss, Spoon Scramble,
Home Connections: 23
Lessons: 1.9, 2.7, 4.1
Math Masters: 50, 112, 127-132, 135, 137-141, 143, 146, 179, 188, 191-198, 228, 230, 238-240, 249, 253, 354, 356, 361, 421, 422, 433, 446, 459, 460-463, 467, 468, 471-484, 487-490, 503

6th Grade: **Games:** Broken Calculator, Exponent Ball, Frac-Tac-Toe, Name That Number, Scientific Notation Toss, Spoon Scramble

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Home Connections: 23

Lessons: 4.1, 6.8

Math Masters: 44, -46, 49, 59-66, 69, 72-77, 79, 105, 109-113, 117, 132-137, 139, 140, 149-155, 184, 189, 194, 195, 199-202, 204, 242, 246-249, 251, 256-259, 263, 265, 267-270, 273, 274, 277, 288, 292-294, 357-361, 363, 365-367, 376-383, 416, 427, 428, 436, 439-444, 446, 447, 454, 455, 462-464, 467-469, 472

Frames and Arrows Resources

Kindergarten: **Math Masters:** 58

1st Grade: **Home Connections:** 24, 25

Lessons: 3.8, 3.9, 3.10, 6.8

Math Masters: 73, 74, 77, 79, 184, 312

2nd Grade: **Home Connections:** 24, 25

Lessons: 2.10, 3.6, 7.4, 9.8

Math Masters: 43-45, 53, 75-78, 80, 203, 204, 227, 285, 424, 431, 432, 457

3rd Grade: **Home Connections:** 24, 25

Lessons: 1.12, 3.9, 8.4

Math Masters: 27, 28, 33, 45, 46, 80, 120, 214

4th Grade: **Lessons:** 2.1

Math Masters: 40, 393

5th Grade: **Math Masters:** 41, 44, 47

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4. Mental Math

Mental Math Resources:

K-6th Grade: **Booklets:** “Minute Math”, “Minute Math +”, “5-Minute Math”

1st-6th Grade: **Teacher’s Lesson Guide:** “Mental Math and Reflexes” at the beginning of Part 1 in all lessons

Kindergarten: **Games:** Pocket Game (Change to More, Change to Less), Plus or Minus Game

Math Masters: 5, 12

1st Grade: **Games:** Before and After, Dime-Nickel-Penny Grab, Penny Drop Addition, 3/2/1 Game, Tic-Tac-Toe Addition

Math Masters: 20, 28, 35, 96-98, 104, 121, 132-137, 140, 150, 243, 252, 261, 264-266, 282, 300, 345, 346

2nd Grade: **Games:** Addition Card Draw, Addition Spin, Basketball Addition, Hit the Target, Multiplication Draw, Shopping, Three Addends, Tic-Tac-Toe Addition

Math Masters: 39, 104-106, 113, 172-175, 177, 210-212, 274, 275, 282, 286-288, 295, 307, 308, 313, 314, 317, 319, 337, 346, 353, 371, 372, 441, 468

3rd Grade: **Games:** Factor Bingo, Less Than You, Memory Addition/Subtraction, Missing Terms, Multiplication Draw, Three Addends, Tic-Tac-Toe Addition

Math Masters: 26, 39, 40, 55, 56, 66-68, 71, 75, 96, 110, 111, 124, 125, 147, 158, 161, 162, 182, 186, 203, 221-227, 268, 269, 283, 321, 322, 324, 325, 328, 330, 336, 337, 349, 363, 377, 384, 394, 445, 447

4th Grade: **Games:** Buzz Games, Calculator 10,000, Factor Bingo, Getting to One, Division Dash, Subtraction Target Practice

Math Masters: 25, 44, 49, 50, 53, 57, 58, 64-66, 82, 93, 94, 102, 103, 113-115, 131, 132, 135, 139, 144-146, 148, 149, 152, 164, 165, 169-171, 208, 209, 211, 239, 251, 255, 269, 285, 286, 289, 292, 293, -295-300, 310-312, 332, 342, 343, 352, 353, 355, 366, 376, 430, 438, 446, 461-465, 483-485, 487-489

5th Grade: **Games:** Angle Tangle, Buzz Games, Division Dash, Estimation Squeeze, Factor Bingo, Factor Captor, Factor Top-It, Fraction Action/Fraction Friction, Fraction Spin, Getting to One, Multiplication Bull’s Eye, 500, Subtraction Target Practice, Top-It Games with Positive and Negative Numbers

Math Masters: 35, 53, 55, 57, 62, 102, 109, 113, 136, 144, 277, 355, 387-393

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6th Grade **Games:** Angle Tangle, Buzz Games, Division Dash, Doggone Decima, Estimation Squeeze, Factor Bingo, Factor Captor, , Fraction Action/Fraction Friction, Top-It Games with Positive and Negative Numbers, Getting to One, Solution Search, Spread Sheet Scramble
Math Masters: 52, 55, 138, 262, 351-356, 368, 369, 371-375, 448

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Algorithm Resources:

Kindergarten: **Adding and Subtracting:** 52,109, 124, 135

Arrays: MM 26, 27

1st Grade: **Facts Table:** MM 161, 162, 176, 297, 324

Home Connections: 30-39

Number line: MM 55, 65, 66- 69, 75, 188, 251, 292, 341

Templates: MM 317, 326, 327, 330, 353

2nd Grade: **Adjusting and Compensating:** MM 111, 115, 171,

Arrays: MM 182-187, 190, 233-247, 281-284, 438, 429

Base 10 blocks: MM 169-170,

Counting on: MM 111,

Dividing: MM 188, 189

Home Connections: 30-39

Number line: MM 46, 79

Partial sums: MM 111, 115, 157

Trade-First subtraction: MM 353-355

3rd Grade: **Addition Partial Sums:** MM 52, 53

Division with counters: MM 90,

Division, Equal groups: MM 93, 290, 291

Home Connections: 30-39

Multiplication Arrays: MM 87, 88, 89, 108, 216, 272-275, 279, 286, 295, 296, 303, 306, 415, 420, 432, 434, 442

x/÷ diagrams: MM 270, 419

x/÷ Fact Table: MM 98, 210,

Multiplication Lattice Grids: 2x3 MM 310, 2x2 MM 304, 305, 307,311, 1x2/1x3 MM 293, 301

Multiplication Partial Products: MM 280, 293

Subtraction, Counting Up: MM 54, 161

Subtraction, Trade First: MM 54, 55, 161

4th Grade: **Addition, Column:** 35, 58

Addition Partial Sums: MM 35, 57, 141

Games: Multiplication Wrestling,

Home Connections: 28-39

Multiplication Lattice Grids: MM 434

Subtraction Partial Differences: MM 35

Subtraction Trade First: MM 35

5th Grade: **Addition Choice of Algorithm:** MM 38

Addition Partial Sums: MM 30

Arrays: MM 8, 9, 12, 13, 20, 21

Base 10 Blocks: 37

Division, Column: MM 115

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Division Partial Quotients: MM 98, 99, 104, 110, 111, 113
Games: Multiplication Wrestling,
Home Connections: 28-39
Make and Break Apart: MM 40
Multiplication Partial Products: MM 56,
Multiplication Lattice: MM 58, 59, 418
Multiplying Fractions and Whole Numbers: MM 235
Multiplying Fractions and Mixed Numbers: MM 237
Subtraction, Trade-first: MM 30

6th Grade: **Dot Paper Template:** MM 419
Decimal Subtraction: MM 48
Decimal Multiplication: MM 51, 54, 56,
Decimal Division: MM 58,
Division Partial Quotients: MM 57
Dividing Whole Numbers: MM 57
Games: Multiplication Wrestling,
Home Connections: 28-39, 177, 181, 182, 281
Integer Addition: MM 90, 91
Integer Subtraction: MM 186, 187, 188, 190
Integer Multiplication and Division: MM 190-193
Fractions addition and subtraction: MM 114, 115
Fraction Multiplication: MM 123, 124
Fraction Division: MM 183, 185
Math Boxes Template: MM 405
Mixed number addition and subtraction: MM 118, 120, 121, 122
Mixed Number Division: MM 185
Mixed Number Multiplication: MM 127-131
Multiplying Whole Numbers: MM 53
Multiplying Sums: MM 285-287
Multiplication Lattice Grids: MM 415

Games: **Teacher's Guide to Games:** pages 16-24
 Game Chart K-6 listed alphabetically by strands (numeration, operations/computation, patterns/functions/algebra, geometry, measurement/reference frame, data/chance):

Teacher's Lesson Guide: Unit Organizers "Practice Through Games"

"EDM Strands" games packet (handed out at inservices and available from the Curriculum Department)

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